

NCR2-81 / NCR2-86 / NCR2-88

8" Sapphire II High Lumen Retrofit Downlight

Source: 16W to 60W LED
900lm to 4500lm

Type
Project
Catalog No.
Notes

PRODUCT DESCRIPTION

The Sapphire II COB Retrofit Series is an architectural grade LED high lumen replacement. Using existing commercial or architectural frame-ins, replace old light source and reflectors with the latest LED technology. Each luminaire includes flexible conduit and junction box with dimmable drivers.

The Sapphire II COB Series is an architectural grade LED high lumen downlight. The Sapphire II uses the latest COB technology by Cree®. The COB allows for better optic control offering three beam spreads. Beam spreads focus the light down to the work plane from high ceiling applications. The reflectors have been designed for the high efficiency (LPW) while providing low aperture brightness. The Sapphire II COB Series is proudly assembled in the USA.

FEATURES

- Retrofit existing architectural or commercial frame-ins with the latest LED technology
- Over 80% energy savings when compared to incandescent
- Cree® COB technology
- Shatter resistant lens
- Specifiable beam spreads
- Deep cone reflector, wall wash or deco glass
- 900lm, 1500lm, 2500lm, 3500lm, and 4500lm LED packages
- 2700K, 3000K, 3500K and 4000K @ 90+ CRI
- 5-year limited warranty
- cULus classified for wet locations
- ENERGY STAR certified

SPECIFICATION

Reflector: Deep cone self flanged reflector spun from 0.050 high grade aluminum provides even illumination and visual comfort. The deep cone reflectors provide 55+ degree cut-off. NCR2-88 includes three studs mounted in the flange for attaching decorative glass. Decorative glass will reduce the amount of usable light by 10 to 30%, depending on the selected glass.

Reflector Assembly: The reflector assembly includes the LED optical package and heat sink mounted on top. Reflector assembly is connected to junction box and dimmable driver. Junction box easily wires to input voltage with wire nuts (included). Luminaire accommodates ceiling thickness from 3/8" to 1-1/2".

ELECTRICAL

Lumens / Wattage:

L09 = 900lm / 16W; **L15** = 1500lm / 18W;
L25 = 2500lm / 28W; **L35** = 3500lm / 46W;
L45 = 4500lm / 60W

Color Temperature: 2700K, 3000K, 3500K, 4000K

Color Render Index: 90+CRI

Beam Spread: (S) Spot; (M) Narrow Flood; (F) Flood

Operating Temperature: 0°C to 45°C

Lifetime: 60,000 hours @ L70

Dimming: Triac, ELV or 0-10V dimming

[Click Here](#) or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab.

COMPATIBLE FRAME-INS

Reflector assembly is compatible with Nora 8" Commercial and Architectural Frames.

NHP8U, NH8PU, NHRP8U, NHPV-8, NH8PV, NHRPV-8, NHFM8, NHFM-9, NHRFM8, NHAV-8, NH-300, NHR-300

LABELS AND LISTINGS

- cULus classified for Wet Location
- ENERGY STAR certified
- [5-Year Limited Warranty](#)
- RoHS Compliant



PRODUCT IMAGES



NCR2-81 Open Reflector

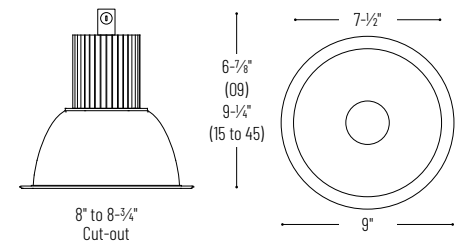


NCR2-86 Wall Wash Reflector



NCR2-88 Decorative Glass Reflector
(Specify glass separately)

PRODUCT DIMENSIONS



8" Sapphire II Retrofit Reflectors

Reflector Type	Lumens / Wattage	Color Temperature	Beam Spread	Driver	Reflector / Flange Finish
NCR2-81 = Open Reflector	09 = 900lm / 16W	27 = 2700K	S = Spot	E3 = 120V Input; Triac/ELV/0-10V dimming	BSF = Black / Self Flanged
NCR2-86 = Wall Wash ¹	15 = 1500lm / 18W	30 = 3000K	M = Narrow Flood	E6 = 120-277V Input; 0-10V dimming	BWSF = Black / White Flange
NCR2-88 = Deco Glass ^{*1}	25 = 2500lm / 28W	35 = 3500K	F = Flood		CSF = Specular Clear / Self Flanged ¹
¹ Not compatible with 4500lm	35 = 3500lm / 46W	40 = 4000K			DSF = Clear Diffused / Self Flanged
	45 = 4500lm / 60W				DWSF = Clear Diffused / White Flange
					HSF = Haze / Self Flanged
					HWSF = Haze / White Flange
					WSF = White / Self Flanged

¹ Not available with wall wash

* Deco Glass Option

- NTG-8B/167** Tempered Blue Glass with 6-5/8" Open Center
- NTG-8B/80** Tempered Blue Glass with 3-1/4" Open Center
- NTG-8CF** Tempered Clear Glass with Frosted Center
- NTG-8FC** Tempered Frosted Glass with Clear Center
- NTG-8HC** Tempered Clear Glass with Frosted Center and 3-1/4" Open Center

Example: **NCR2-813535ME6WSF** = 8" Sapphire II Retrofit Reflector, 3500lm / 46W, 3500K, Narrow Flood Beam Spread, 120-277V, White Finish / Self Flanged

PHOTOMETRICS

8" Sapphire II Retrofit Series

Type

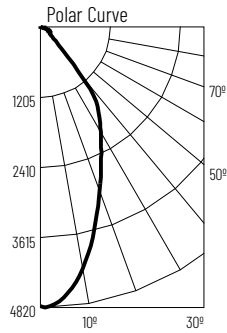
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Test Information

Test Number: 727461
 Part Number: NCR2-81L4540SWSF
 Lumens: 4630lm
 Wattage: 56.3W
 Efficacy: 82lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 0.76
 Spacing Criteria (90°-270): 0.76



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	135fc	5'-11"
9'	60fc	8'-10"
12'	33.8fc	11'-8"
15'	21.6fc	14'-8"
18'	15fc	17'-7"

Zonal Lumen Summary

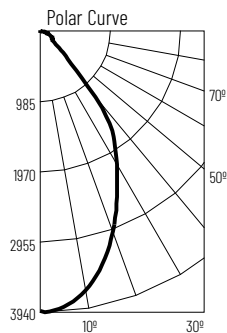
Zone	Lumens	% Luminaire
0-30	2573	55.6
0-40	3642	78.7
0-60	4298	92.8
0-90	4598	99.3
90-180	32	0.7
0-180	4630	100

Candela Table

Vertical Angles	Candela
0	4800
5	4667
15	3600
25	2485
35	1749
45	515

Test Information

Test Number: 727477
 Part Number: NCR2-81L4540MWSF
 Lumens: 4596lm
 Wattage: 56W
 Efficacy: 82lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 0.92
 Spacing Criteria (90°-270): 0.92



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	109fc	7'-8"
9'	48.4fc	11'-7"
12'	27.2fc	15'-5"
15'	17.4fc	19'-4"
18'	12.1fc	23'-1"

Zonal Lumen Summary

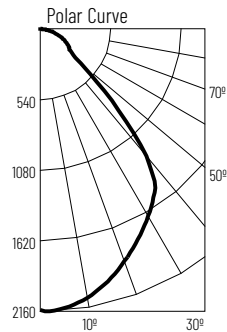
Zone	Lumens	% Luminaire
0-30	2475	53.8
0-40	3571	77.7
0-60	4266	92.8
0-90	4565	99.3
90-180	31	0.7
0-180	4596	100

Candela Table

Vertical Angles	Candela
0	3819
5	3864
15	3377
25	2555
35	1804
45	567

Test Information

Test Number: 727489
 Part Number: NCR2-81L4540FWSF
 Lumens: 3762lm
 Wattage: 56.2W
 Efficacy: 67lpw
 CCT / CRI: 4000K / 90 CRI
 Spacing Criteria (0°-180): 1.16
 Spacing Criteria (90°-270): 1.16



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	59.7fc	10'-10"
9'	26.5fc	16'-2"
12'	14.9fc	21'-7"
15'	9.6fc	26'-11"
18'	6.6fc	32'-4"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1577	41.9
0-40	2514	66.8
0-60	3384	90
0-90	3737	99.3
90-180	25.2	0.7
0-180	3762	100

Candela Table

Vertical Angles	Candela
0	2150
5	2134
15	1991
25	1765
35	1521
45	786

Lumen Output Multipliers

Color Temperature: 2700K (0.87), 3000K (0.91), 3500K (0.96), 4000K (1.00)
 Lumen Package: L09 (0.25), L15 (0.34), L25 (0.53), L35 (0.83), L45 (1.00)